UNITED STATES PATENT AND TRADEMARK OFFICE

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10/781,883	02/20/2004	David James Seal	550-509	4228

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EXAMINER
FENNEMA, ROBERT E

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte DAVID JAMES SEAL and EDWARD COLLES NEVILL

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Appeal 2009-005737
Application 10/781,883
Technology Center 2100

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Decided: March 11, 2010

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Before JAMES D. THOMAS, LANCE LEONARD BARRY, and
STEPHEN C. SIU, *Administrative Patent Judges.*

BARRY, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

The Patent Examiner rejected claims 1-33. The Appellants appeal
therefrom under 35 U.S.C. § 134(a). We have jurisdiction under 35 U.S.C.
§ 6(b). An oral hearing was held on February 4, 2010.

INVENTION

The Appellants describe the invention at issue on appeal as follows.

A data processing system supporting multiple instruction sets allows considerable flexibility in the way in which program operations may be represented, and that flexibility can yield improved code density. But the typical trade-off is increased hardware to support the multiple instruction sets. The [Appellants] overcame this problem by arranging the encoding of the instruction sets such that a common subset of instructions has the same encoding, after variations due to storage order, e.g. endianness, have been compensated for. As a result, the data processing system implementation can be advantageously simplified by using a common decoding logic which reduces the hardware needed.

(Appeal Br. 2.)

ILLUSTRATIVE CLAIM

23. A computer program product embodied in a storage medium for storing a computer program operable to control a data processing apparatus containing data processing logic operable to perform data processing operations, said computer program comprising:

program instructions of a first instruction set and program instructions of a second instruction set, that control said data processing logic to perform said data processing operations; wherein

a subset of program instructions of said first instruction set have a common storage order compensated encoding with a subset of program instructions of said second instruction set and form a common subset of instructions representing at least one class of instructions, said common subset of instructions controlling data processing logic to perform the same data processing operations independent of whether instructions of

said first instruction set or of said second instruction set are
being decoded.

PRIOR ART

| McFarland | US 5,781,753 | Jul. 14, 1998 |
| Qureshi | US 2004/0030856 A1 | Feb. 12, 2004 |

REJECTIONS

Claims 1-6, 8-17, 19-28, and 30-33 stand rejected under 35 U.S.C.
§ 102(b) as anticipated by Qureshi.

Claims 7, 18, and 29 stand rejected under 35 U.S.C. § 103(a) as
unpatentable over Qureshi and McFarland.

ISSUE

The Examiner concludes that "the broadest reasonable interpretation
is that the first and second instruction sets could . . . be the same" (Answer
15) and "that the claims must not only encompass the possibility of the
subsets being different, but that it also encompasses the possibility that they
are the same." (*Id.* at 16.) The Appellants argue that "Qureshi does not
disclose the claimed common subset of instructions formed by a subset of
program instructions from the first instruction set and the subset of program
instructions from the second instruction set." (App. Br. 14.) Therefore, the
issue before us is whether the Appellants have shown error in the Examiner's
finding that Quershi discloses a common subset of instructions formed by a
subset of program instructions from a first set of instructions and a subset of
program instructions from a second set of instructions.

LAW

"It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim, and that anticipation is a fact question . . . ." *In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) (citing *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1457 (Fed. Cir. 1984)). Furthermore, "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (quoting *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)). "Inherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981) (citing *Hansgirg v. Kemmer*, 102 F.2d 212, 214 (1939)).

FINDINGS OF FACT

Qureshi "allows for [a] system event register present in a processor, or other location of memory, to be accessed as either big or little endian registers depending on an operating system (OS) accessible bit for endian selection." (¶ [0004].) More specifically, an "endian selection register contains a flag to indicate in which mode (big or little endian) to operate." (¶ [0005].)

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ANALYSIS

It is uncontested that Qureshi mentions neither instructions nor instruction decoding. We agree with the Examiner, however, that "because Qureshi functions, and functions in both [endian] modes, the conclusion must be that Qureshi [inherently] teaches an instruction decoder, to decode program instructions, and operable in both the disclosed modes in Qureshi." (Answer 14.) Such reasoning, however, only necessitates a single set of instructions. It does not necessitate a second set of instructions as claimed. Furthermore, we agree with the Appellants that Qureshi's "storing data in one format or another format has nothing to do with decoder modes in which program instructions from a first instruction set and a second instruction set are decoded by the same decoder." (Appeal Br. 10.) "[T]he big endian and little endian modes are simply different ways of storing data in a register." (*Id.*)

We further agree with them that "Qureshi does not describe any subset of program instructions—let alone the claimed first and second subsets." (*Id.* at 13.) Regarding the Examiner's aforementioned interpretation that the subset of subset of instructions from a first set of instructions, the subset of program instructions from a second set of instructions, and the common subset formed from these two subsets are all the same, we agree with the Appellants that "if every instruction in the first and second instruction sets was part of the common subset of program instructions, then the first and second instruction sets would be the same instruction set" (Appeal Br. 13), thus emphasizing that only a single set of instructions is necessarily present

in Qureshi. The Examiner does not allege, let alone show, that the addition of McFarland cures the aforementioned deficiency of Qureshi.

CONCLUSION

Based on the aforementioned facts and analysis, we conclude that the Appellants have shown error in the Examiner's finding that Quershi discloses a common subset of instructions formed by a subset of program instructions from a first set of instructions and a subset of program instructions from a second set of instructions.

DECISION

We reverse the rejection of claims 1-33.

REVERSED

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